

**AMENDMENTS TO THE CLAIMS:**

This listing of the claims will replace all prior versions, and listings, of the claims in this application.

**Listing of Claims:**

1. (Currently Amended) A method for enabling an introduction of a 200kHz GSM-type network into a TDMA system having a bandwidth that is substantially less than a 2.5MHz bandwidth normally employed for GSM-type networks, comprising the steps of:

providing a 52-multiframe containing 12 blocks of four consecutive frames, two idle frames, and two channels used for control channel purposes, said frames comprising a ~~number~~ plurality of sequentially numbered timeslots; and

rotating control channels belonging to a serving time group over ~~every other~~ non-sequential, alternate timeslot ~~number~~ numbers within a frame.

2. (Currently Amended) The method as in claim 1, wherein the rotation occurs over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5,..., ~~etc.~~; and where the rotation occurs between frame numbers  $(FN) \bmod 52 = 3$  and 4.

3. (Previously Presented) A method to enable an introduction of a 200kHz GSM-type network into a TDMA system having a bandwidth that is substantially less than a 2.5MHz bandwidth normally employed for GSM-type networks, comprising:

providing a 52-multiframe containing 12 blocks of four consecutive frames, two idle frames, and two channels used for control channel purposes, each of said frames comprising a number of timeslots; and

rotating control channels belonging to a serving time group over every other timeslot

number,

wherein a mapping of the control channels on timeslot numbers is defined by the following formula:

For  $0 \leq \text{FN mod } 52 \leq 3$ ,  $\text{TN} = ((6 \times ((\text{FN div } 52) \text{ mod } 4)) + 1 + (2 \times \text{TG})) \text{ mod } 8$ ; and

For  $4 \leq \text{FN mod } 52 \leq 51$ ,  $\text{TN} = ((6 \times ((\text{FN div } 52) \text{ mod } 4)) + 7 + (2 \times \text{TG})) \text{ mod } 8$ ,

where TG is a time group value.

4. (Previously Presented) The method as in claim 1, wherein information specifying at least the rotation direction is signalled to the mobile station in a downlink synchronization channel.

5. (Currently Amended) A wireless TDMA digital communications system, comprising:

at least one mobile station; and

a plurality of base transceiver stations individual ones of which are capable of transmitting packet data to, and receiving packet data from, said mobile station using a 52-multiframe, said frames comprising a ~~number~~ plurality of sequentially numbered timeslots, wherein individual ones of said base transceiver stations rotate the transmission of control channels belonging to a serving time group over ~~every other~~ non-sequential, alternate timeslot ~~number~~ numbers within a frame for enabling said mobile station to perform reselection measurements on neighboring base transceiver stations ~~without dropping traffic~~.

6. (Previously Presented) The system as in claim 5, wherein the rotation occurs between frame numbers  $(\text{FN}) \text{ mod } 52 = 3$  and 4.

7. (Previously Presented) A wireless TDMA digital communications system, comprising:

at least one mobile station; and

a plurality of base transceiver stations individual ones of which are capable of transmitting packet data to, and receiving packet data from, said mobile station using a 52-multiframe, said frames comprising a number of timeslots, wherein individual ones of said base transceiver stations rotate the transmission of control channels belonging to a serving time group over every other timeslot number for enabling said mobile station to perform reselection measurements on neighboring base transceiver stations without dropping traffic,

wherein a mapping of the control channels on timeslot numbers is defined by the following formula:

For  $0 \leq FN \bmod 52 \leq 3$ ,  $TN = ((6 \times ((FN \div 52) \bmod 4)) + 1 + (2 \times TG)) \bmod 8$ ; and

For  $4 \leq FN \bmod 52 \leq 51$ ,  $TN = ((6 \times ((FN \div 52) \bmod 4)) + 7 + (2 \times TG)) \bmod 8$ ,

where TG is a time group value.

8. (Previously Presented) The system as in claim 5, wherein information specifying at least the rotation direction is signalled to the mobile station in a downlink synchronization channel.

9. (Currently Amended) The system as in claim 5, wherein the rotation of the control channels occurs in odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5, ..., etc.,

10. (Currently Amended) A network component of a wireless TDMA communications system, comprising circuitry to transmit information to a mobile station using a 52-multiframe, where frames comprise a number of plurality of sequentially numbered timeslots, said circuitry

operating to rotate the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5,..., ~~etc.~~, where the rotation occurs between two predetermined frame numbers (FNs).

11. (Previously Presented) The network component of claim 10, where the rotation occurs between  $\text{FNs mod } 52 = 3$  and 4.

12. (Currently Amended) A network component of a wireless TDMA communications system, comprising circuitry to transmit information to a mobile station using a 52-multiframe, where frames comprise a ~~number~~ plurality of sequentially numbered timeslots, said circuitry operating to rotate the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5,..., ~~etc.~~, where the rotation occurs between two predetermined frame numbers (FNs), and where a mapping of the control channels on timeslot numbers (TNs) is defined by:

For  $0 \leq \text{FN mod } 52 \leq 3$ ,  $\text{TN} = ((6 \times ((\text{FN div } 52) \bmod 4)) + 1 + (2 \times \text{TG})) \bmod 8$ ; and

For  $4 \leq \text{FN mod } 52 \leq 11$ ,  $\text{TN} = ((6 \times ((\text{FN div } 52) \bmod 4)) + 7 + (2 \times \text{TG})) \bmod 8$ ,

where TG is a time group value.

13. (Currently Amended) A mobile station for use in a wireless TDMA communications system, comprising circuitry to receive information from a 52-multiframe, where frames comprise a ~~number~~ plurality of sequentially numbered timeslots, said receive circuitry operating to synchronize to the rotation of the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as 7, 5, 3, 1, 7, 5,..., ~~etc.~~, where the rotation occurs between two predetermined frame numbers (FNs).

14. (Currently Amended) ~~The mobile station of claim 13~~ A mobile station for use in a wireless TDMA communications system, comprising circuitry to receive information from a 52-multiframe, where frames comprise a plurality of sequentially numbered timeslots, said receive circuitry operating to synchronize to the rotation of the transmission of a control channel belonging to a serving time group over odd timeslot numbers in a repeating sequence given as

S.N.: 09/575,033  
Art Unit: 2666

7, 5, 3, 1, 7, 5, ..., where the rotation occurs between two predetermined frame numbers (FNs),

where a mapping of the control channels on timeslot numbers (TNs) is defined by:

For  $0 \leq \text{FN mod } 52 \leq 3$ ,  $\text{TN} = ((6 \times ((\text{FN div } 52) \bmod 4)) + 1 + (2 \times \text{TG})) \bmod 8$ ; and

For  $4 \leq \text{FN mod } 52 \leq 51$ ,  $\text{TN} = ((6 \times ((\text{FN div } 52) \bmod 4)) + 7 + (2 \times \text{TG})) \bmod 8$ ,

where TG is a time group value.